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Authors of papers intended for publication in FOOD TECHNOLOGY should request from the Editor's office a copy of a booklet, tittled "Suggestions to Authors," and see that their papers are in the form specified therein before they are sent to the editor.

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News of the Institute

PAUL FRANCIS SHARP

President, Institute Food Technologists, 1950-1951

Born in Allen, Nebraska in 1894, Paul Francis Sharp attended grade and high schools in that state, part of of the time living on a farm or in little country towns and knowing full well the burning heat in the summer and bitter chill and snows of the Nebraska climate.

World War I found Paul in the Chemical Warfare Service, assigned to the American University in Washington, D. C. The war over, he started graduate work at the University of Minnesota in the Department of Agricultural Biochemistry, obtaining his M.S. in 1920 and two years later his Ph.D. in the field of cereal chemistry under the late Professor R. A. Gortner.

After receiving his doctorate, Dr. Sharp went to the Montana Agricultural Experiment Station at Bozeman, first as assistant chemist and later as associate chemist, carrying on research in the field of wheat and baking technology.

In 1925 he received the appointment of Professor of Dairy Chemistry at Cornell, a position he held for seventeen years. While at Cornell, Dr. Sharp majored in research in dairy chemistry, along with important investigations on eggs and potatoes. His contributions to dairy technology included studies on milk, sugar, lypolytic activity, ascorbic acid content of milk, milk flavors, and cheese making. His outstanding research was recognized by the American Dairy Science Association which granted him the Borden Award in 1941.

In 1942, Dr. Sharp left Cornell to become Director of Research of the Golden State Company at San Francisco, California. Here he directed research on various phases of milk processing. Particularly important were his contributions to the production of dry milk.

Dr. Sharp was appointed Director of the California Agricultural Experiment Station in 1949, a position he still holds.

On August 31, 1917, Dr. Sharp married Bernice Faustine Pyle; they have three children: Marylin Bernice, Joanna Juanita and Paul Francis.

Dr. Sharp is a member of the American Chemical Society; A. A. A. S.; Society for Experimental Biology and Medicine, and the American Dairy Association. He is an associate editor of *Dairy Science*. Active in Phi Lambda Upsilon, Gamma Alpha, Sigma Xi, Camma Sigma Delta and Phi Kappa Phi, he has found time to be Chairman of the Program Committee of the Annual 1943 Meeting of the IFT at St. Louis; to be a National Councilor of the Northern California Section of IFT and Chairman of the Research and Marketing Act Dairy Advisory Committee of the U. S. Department of Agriculture.

Dr. Sharp is the author of *Physik der Milchwirtschaft* (Berlin, 1928), and numerous papers published in technical journals.

PRESENTATION OF THE 1950 NICHOLAS APPERT MEDAL AWARD

Thomas M. Rector
1894-1950

The Nicholas Appert Award Jury of the Chicago Section selected Thomas M. Rector, Vice President of the General Foods Corporation, to be the 1950 recipient of the Nicholas Appert Medal. Shortly after this announcement was made, to the shock and sorrow of food

(Continued on page 10 following technical papers)

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Abstracts

(Continued from page 4)

EGGS

261J. Evaluation of future perishability of intact fresh eggs by radio frequency conductivity.

ROMANOFF, A. L. *Food Res., 14,* 310-13 (1949).

New laid eggs differ greatly in radio frequency conductivity, with eggs laid by the same hen having fairly similar conductivity. It is possible that these conductivity differences are related to differences in internal quality. Conductivity increases as time passes at a rate directly related to the original conductivity of the egg.

FATS AND OILS

262J. The alkali refining of oils containing vitamin A.

HARTMAN, L. *J. Soc. Chem. Ind., 69,* 55-8 (1950).

Under usual refining conditions, neutralization with alkalies increases rather than decreases vitamin A potency. The increase is approximately proportional to the free fatty acid content of the original oil. Refining losses of vitamin A were determined.

263J. Feeding tests with gallic acid ester antioxidants.

NILSON, H. W., BENDER, M., AND DARLING, D. B. *Comm. Fish. Rev., 12,* 20-21, Feb., 1950.

No chronic toxicity of the gallic acid derivatives was indicated when fed at a level of 0.5% gallic acid equivalent the cottonseed oil. This is equivalent to 0.05% in the total diet.

264J. Metal deactivation in lard.

MORRIS, S. G., MYERS, J. S., JR., KIPS, M. L., AND RIEMENSCHNEIDER, R. W. *J. Am. Oil Chem. Soc., 27,* 105-07 (1950).

A number of compounds, including known synergists, amino acids, and amines, have been evaluated as deactivators for copper, iron, nickel, and tin in lard. Some were effective in deactivating copper, but were relatively poor for iron. One compound was better for iron than for copper. Ascorbyl palmitate, potassium ascorbyl palmitate, and ascorbic, tartaric, citric, and phosphoric acids were the most effective. This deactivation may in part explain the synergistic effect of these compounds with phenolic antioxidants. The more powerful antioxidants however are generally poor metal deactivators, and in the presence of traces of metallic pro-oxidants become relatively ineffective unless metal deactivators are also added.

FISH AND SEAFOOD

265J. Floating cannery for whale meat.

Industrias Pesqueras No. 536, 6-15, Aug., 1949; *World Fish Abst., 1,* 5, Jan.-Feb., 1950.

Whale meat has been extensively used as food in Norway. During recent years the frozen meat has also been used in England. An English company, United Whalers Ltd., has installed a cannery for whale meat in one of its boats. The factory is mounted on three decks. The handling, preparation, and canning take place on the upper deck, the sealing operations on the second deck, and the processing and storage on the lower deck. The canning is completed a few hours after the whale is killed. The killed whale is hoisted aboard the mother ship, where it is cut up and the oil extracted. The pieces of meat best suited for canning are selected and transported to the floating cannery. The fresh meat is cut by hand into pieces which will fit the mechanical cutters. These contain three sets of circular blades. The first slices the meat, the second cuts the slices into strips, and the third cuts the strips into cubes. The meat is taken in containers of stainless steel to the filling machines, which add juice or sauce. After being sealed, the cans are transported to the processing compartment, where they are sterilized in a battery of six horizontal retorts. The cans are cylindrical in shape and are enameled inside. An air conditioning installation in the hull prevents rusting of the cans.

266J. Brown discoloration of canned crawfish.

DREOSTI, G. M., AND VAN DER MERWE, R. P. *(Jasus lalandii). Progress Report No. 7,* Oct., 1949; *World Fish Abst., 1,* 5, Jan.-Feb., 1950.

Considerable variations were found to occur in the color of canned crawfish, ranging from snow-white to brown. Browning during canning was found to be unrelated to such factors as the freshness of the fish, red pigment (astacin) of the epidermis, natural pH, etc., but directly related to the amount of reducing substances in the natural flesh and to severity of retorting. Too long a first cook—e.g., 15 minutes at 115.6° C. (240° F.)—or too short a first cook—e.g., less than 5 minutes at 115.6° C. (240° F.)—resulted in severe browning. Storage of the canned products between 0° C. (32° F.) and about 21° C. (70° F.) did not appreciably increase discoloration, but in the vicinity of 3.67° C. (98° F.) caused severe browning. Browning may be minimized by soaking the fish in running (fresh or sea) water for about 15 minutes after the first cook. Too long a soak, however, results in appreciable losses of flavoring substances from the flesh.

267J. Fish solubles and liquid fish for growing and fattening swine.

GEURIN, H. B., HOEFER, J. A., AND BEESON, W. M. *J. Animal Sci., 9,* 94-9, Feb., 1950.

Fish solubles and liquid fish have been compared for their supplemental value to an all-plant basal ration of corn, soybean oil meal, sun-cured alfalfa meal, and minerals for growing and fattening swine in dry lot. The results obtained indicate that condensed fish solubles and liquid or semi-solid fish contain dietary factors other than protein, which greatly improve the nutritive value of a corn-soybean meal ration for growing-fattening pigs.

268J. Shrimp peeling machine.

Southern Fisherman, 9, No. 11, 33, Sept. 19, 1949; *Comm. Fish Abst. 3,* 23-4, Jan., 1950.

Washed, whole shrimp are delivered to the peeling machine from a hopper tank where they are spread onto an inclined belt in a uniformly even layer. The apparatus which does the actual peeling uses nine 3-inch diameter, rubber covered rollers located side by side and running the full length of the machine which is pitched downward at an angle of approximately 15 degrees. There is practically no breakage of shrimp, and there is an increase of from 5 to 10% in the recovery of meat from the head and tail sections that is impossible to obtain with hand peeling. The machine is said to be capable of replacing from 15 to 60 hand pickers, depending upon the conditions of operation.

PECTIN

269J. Studies on lemon pectin. II. Behavior of pectic substances during ripening.

CULTRERA, R., AND DE LUCA, G. *Ann. Chem. Appl. 37(2),* 75-80 (1947); *Biol. Abst. 24,* 319, No. 3600 (1950).

Lemons were analyzed during ripening from February to May for their protopectin content. This insoluble pectin-cellulose complex is isolated and hydrolyzed by cold mineral acid in 60% ethanol for 80 hours. The liberated, but alcohol-insoluble pectin is weighed and analyzed for acidity, methoxyl, ash, Ca pectate and jellability. Until the last weeks of maturity, the protopectin content remains 12% of the fruit, as it has to defend the cellular integrity; but it drops to 8% upon complete maturation. Its properties are constant during the entire period. Protopectin is a depot substance, while increasing quantities of free pectin are formed steadily from the assimilate via galacturonic acid.

(Continued on page 11 following technical papers)

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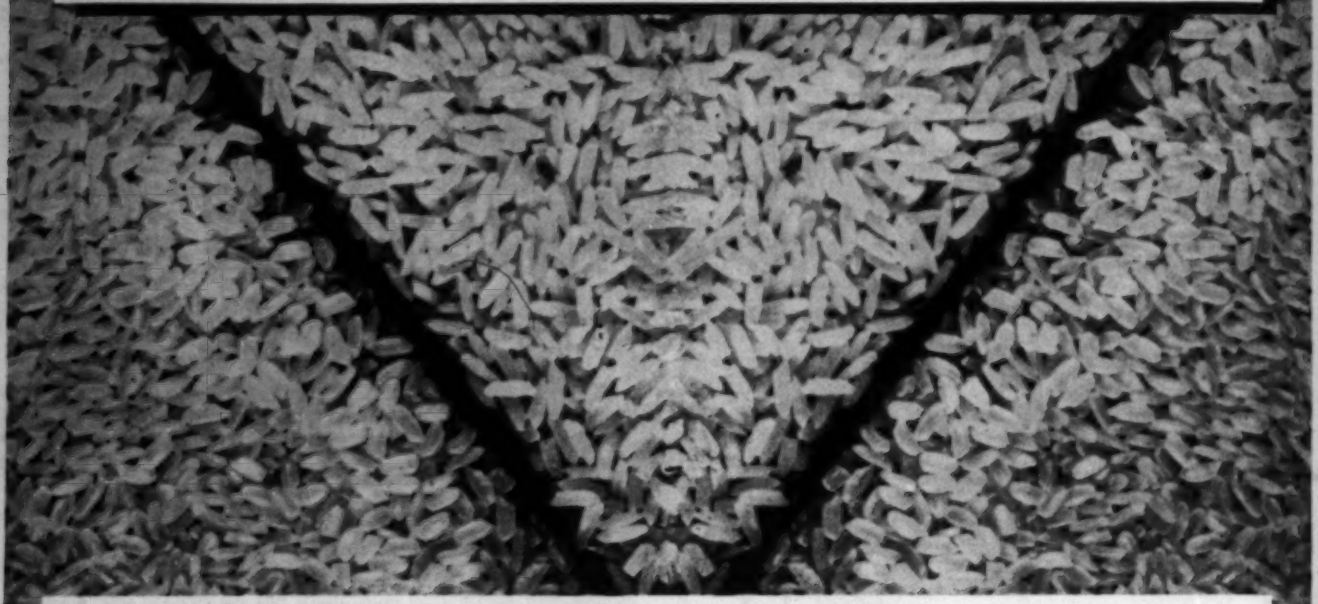

NOW...MILLED WHITE RICE CAN MEET MODERN NUTRITIONAL DEMANDS

Nutritionists, Government authorities and cereal processors the world over will, we believe, welcome this Hoffmann-La Roche news. For until peoples of the great rice-eating nations can enjoy a state of health free from beriberi and other effects of malnutrition, world trade and international security will be deprived of a most essential guarantee. A nation cannot be BOTH productive and happy without good health. Now it can be both even if its people's principal staple food is milled white rice.

Enrichment of wheat flour, macaroni products and corn meals was a relatively simple problem which Roche chemists and technical experts helped to solve. However, the popular practice of washing or rinsing rice before cooking renders the usual type of enriching premix useless since the vitamin content dissolves in the water and is lost. As a leader in world production of vitamins, Hoffmann-La Roche looked for a means of hurdling this difficulty, found it, and its patented processes have been made available to the rice milling industry.

Going further, and to demonstrate conclusively that addition of lacking vitamins and minerals to a staple food cereal was a practicable and easy means of correcting dietary deficiencies, Hoffmann-La Roche joined with four other participants in making possible the greatest nutritional experiment* of all time. Involving 100,000 Philippine people, this experiment has furnished proof with which flour millers, bakers and other cereal processors can overcome the "doubting Thomases" of "enrichment."

Ask to see, and if you eat rice insist upon being served, the new "nutritionally improved" milled white rice carrying thiamine, niacin and iron at the same minimum per pound levels as enriched white wheat flour and corn products.

*The experiment is under the joint auspices of the Williams-Waterman Fund, Republic of the Philippines Department of Health, United States Public Health Service Rehabilitation Program, National Rice and Corn Corporation of the Philippines and Hoffmann-La Roche Inc. Preliminary reports published thus far have appeared in the Journal of Nutrition of August 1949, Journal of the Philippine Medical Association, November 1949, and the Rice Journal of April, 1950.

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NEW SAFETY CODE FOR REFRIGERATION APPROVED AND PUBLISHED

The revised Safety Code for Mechanical Refrigeration, commonly known in the refrigeration industry as the American Standard B9 Code, has been thoroughly revised, superseding the old 1939 edition of B9, and is now available for sale by the American Society of Refrigerating Engineers, 40 West 40th Street, New York City, for $1.00 per copy. The ASRE is sponsor of the Code which has been adopted as an industry standard by the American Standards Association.

The revised B9 Code is the result of several years' effort by an ASA Sectional Committee composed of 77 members and several subcommittees with more than 25 members. These members represent every phase of the refrigeration industry as well as casualty and insurance groups, the Bureau of Explosives, the valve and fittings industry, the National Fire Protection Association, the Underwriters' Laboratories, and many others.

The new Code is considerably more comprehensive than its predecessor. Additions have been made to clarify controversial sections in the old Code and to cover new equipment and installation procedures which have been adopted since the war. In general, all of the requirements are much more specific, more to the point, and more readily understood. Certain of the requirements dealing with piping, copper tubing, and fittings have been brought up to date and clarified.

The sponsors of the Code are emphatic in their recommendation that municipalities and states adopt the new Code in its entirety. The sponsors point out that, "a great deal of the value of the Code is lost if only sections of it are followed and practiced; the Code is built, one regulation upon another, and to use it piecemeal is to destroy the effectiveness of the document."

The foreword of the Code states, "It is desirable that this Code be universally adopted so that safety provisions for refrigerating installations will be standardized, thereby permitting quantity production of refrigeration equipment with minimum cost to the user."

An Interpretations Committee has

(Continued on page 15)

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News of the Institute

(Continued from page 6)

technologists throughout the nation, Mr. Rector died on April 1st at Battle Creek, Michigan.

At the Tenth Annual Convention of the Institute of Food Technologists at Chicago, Illinois, Mrs. Rector accepted the Award on behalf of her late husband. The presentation took place at the Nicholas Appert Medal Banquet on May 23, 1950. Below we record the proceedings of the presentation.

Thomas M. Rector Memorial Address

by Clarence Francis
Chairman of the Board, General Foods Corporation

We are talking today about a truly great American of real pioneer stock. Tom was born near Warrenton, Virginia in 1894. His forebears emigrated to that immediate territory in 1713 and at that point they established the first iron mine and foundry in Virginia.

Tom was a relative of the Governor of Arkansas. His cousin was Secretary of State. His grandfather headed the first United States Marine Band, and as a matter of fact, talked to John Philip Sousa.

He attended country school at Georgetown and Western High School in Washington, D. C. He never did attend college as such, but at high school he became interested in chemistry and at the age of 18, at which age most of us were floundering around, he decided on technical work for improving food products as a career. At that time, no courses were available. His education came from observation and the study of anything he could lay his hands on.

He worked in a chemical consulting laboratory in Washington, D. C. He was a chemist for the Pompeian Olive Oil Company. While there he aided in developing three new products and at a very early age developed a new continuous emulsifying process.

Later, he went to war, World War I, enlisting as a private in the Chemical Warfare Service and afterwards became a first lieutenant. During that period also his inventive genius was active for he developed a process for producing gas mask charcoal.

While working for the Institute for Industrial Research Tom founded the Division of Food Technology in 1920. This was the first time the term "Food Technology" had been formally used.

He then became Director of Chemistry in the largest consulting firm in New York City. Later, he became Research Director of the Franklin Baker Company and while there he proved that inert gas packing was useful in many ways. He went to India and while there developed ways of collecting, treating and shipping cashew nuts and as a result of his operations, became the largest importer and seller of cashew nuts.

At one time the teacher asked his daughter what her father's business was and she replied, "My father is King of the Nuts."

He went to work for the Hellmann Company and there developed a new method for producing salted egg yolk. In 1927 General Foods purchased the Hellmann business. We bought a business and we got Tom Rector. We sold the business, but we kept Rector.

Tom became General Manager of our Central Laboratories where several hundred people are employed and where a few million dollars are expended in research each year.

He later became Vice President in charge of all Research and then was made a member of our Executive Council, which is the management group of the business.

He developed at least 15 successful new products. Just how many new processes he was responsible for nobody knows, but there were plenty of them. A typical example of his operations would be the decaffeinization of coffee. When that process was acquired, the operation took 88 hours. When Tom got through with it, it was down to 8 hours and had he lived, even more time might have been saved.

Let me read a list of some of the patents which we know have been issued to Tom:

Producing Transparent Emulsion, 1921
Recovery of Volatile Solvents, 1922
Packaging Tobacco and the Like, 1925
Battery, 1925
Mushroom Paste, 1927
Canning Process, 1927
Preserved Food Product and Process, 1928
Preserving Products Formed of Rubber, 1928
Coffee Preparation, 1929
Apparatus for Packing Cashew Nuts, 1929
Preserving Eggs, 1930
Extracting Nut Oil, 1930
Packing Nuts, 1931
Method and Apparatus for Extracting Oil from Nuts, 1932
Forming Transparent Containers, 1934
Apparatus for Preparing Food Products, 1935
Preparing Food Products, 1935
Extracting Oil from Cashew Nuts, 1935
Apparatus for Vacuumizing, 1937
Treatment of Nuts, 1940
Coconut Product and Process for Making Same, 1942
Process and Apparatus for Decaffeinating Coffee, 1943
Method and Apparatus for Solvent Extraction, 1945
Helix of Metal Wire for Use as Fishing Sinkers and for Other Purposes, 1950
Therapeutic Pectous Product, 1943

He had many other activities. He was an author. His book, "Scientific Preservation of Food," is widely used.

He was a member of leading scientific societies.

He was a speaker in great demand.

He was a consultant for the Government and a member of many important Governmental committees.

Tom's story is truly a typically American story. He was a man of modest means. He worked hard for all he got. He set his own course and became a success. This Way of Life, which so definitely typifies Rector, is one which is bandied about in some quarters too lightly and without appreciation.

You men who are so individualistic, who are so thoughtful, who are so ingenious, who inspire new methods and better products, should fully appreciate the value of this Way of Life and do all that you can in your respective communities to preserve it.

Yes, Tom had great technical skill, but those of us

(Continued on page 13)

Abstracts

(Continued from back of insert)

270J. Pectin studies. IV. Consideration of gel strength and viscosity.

LAMPITT, L. H., MONEY, R. W., AND JUDGE, B. E. *J. Soc. Chem. Ind., 69,* 53-5 (1950).

Gel strength and viscosity studies have been carried out employing a series of pectins obtained by degrading citrus pectin by grinding for various times in a ball mill. As degradation increased, the quantity of material estimated as calcium pectate, but not contributing to gel formation, increased and the slope of the straight line representing the gel strength and square of the concentration relationship became less. It is shown that this slope bears a linear relationship to the limiting viscosity values for the pectin in aqueous solution and the nitro-ester in acetone solution and that it is proportional to the Young's modulus of the fibrils constituting the gel.

SUGARS AND SIRUPS

271J. A new sweetening agent.

LEHMSTEDT, K. *Seifen-Ole-Fette-Wachse 75,* 81-2 (1949); *Chem. Abst. 44,* 1207i (1950).

The new sweetening agent 2-propoxy-5-nitroaniline (cf. C. A. 41, 4170e; 42, 5899ad) may not be physiologically innocuous for human consumption, but its sweetening power is so high (4,000 times that of sugar) that only minute concentrations are required. Since small quantities of vitamin C (250-1200 mg. percent as present in rose-hips) are sufficient to reduce the NO_2 group and destroy the sweetening power, the compound should be added to foods only after cooling.

272J. New uses sought for maple products.

Rep. Bur. Agr. Ind. Chem. (1949); *J. Am. Diet. Assoc., 26,* 176, Mar., 1950.

An experimental maple sirup that is almost entirely free of both maple flavor and the associated color was made by low-temperature vacuum evaporation of sugar-maple sap. The production of such a sirup, together with other substantiating evidence, strongly indicates that the flavor and color of maple sirup are not pre-existent in the sap, but are developed by conventional processing after the sap leaves the tree.

PACKAGING

273J. Rat repellent.

HAMPEL, C. A. *Pest Control, 17,* 40 (1949); *Pack. Abst. 7,* 12, No. 36, Jan., 1950.

It is suggested that sodium fluosilicate, properly coated on the outer surface of paperboard shipping cartons, would do much to stop the loss caused by rats. The compound might be applied in the glue liner of the paperboard or incorporated in the paperboard itself at the time of manufacture. Sodium fluosilicate has the advantage of being an irritant and repellent to warm-blooded animals even in small quantities. Studies to evaluate its possibilities are in progress.

274J. Danish research on the use of aluminum for canned foods.

BRAMSNAES, M. *Rev. fermentations et inds. aliment., 3,* 196-202 (1948); *Chem. Abst. 44,* 1619^h (1950).

Ordinary Al can be used for cannery products in the pH range 6.2-7.2; with anodized (oxidized) Al the pH may extend down to 5.5. An alloy with 1.25% of Mn is necessary with smoked herring and kipper snacks. Most fish in oil can be canned in plain Al but tuna in oil and certain sardines require anodized Al. Certain unsterilized salted products can be canned in plain Al, others not. Lacquered cans must be used with vegetables, especially those containing oxalic acid (spinach, kale) which is strongly corrosive on Al; addition of a small amount of $CaCl_2$ relieves this condition. Meats canned in ordinary Al develop H swells in 6 months; anodized and lacquered cans are required for stews and smoked ham products. Plain

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Matmor Canning Co.
Minnesota Valley Canning Co.
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Abstracts

Al is suitable for condensed milk (with sugar) but unsugared milk requires the anodized metal. Anodized and lacquered Al is required for fruits; otherwise H swells develop.

PATENTS

275J. Acid leaching of pectinous materials.

OWENS, H. S. *Assignor to the United States of America as represented by the Secretary of Agriculture.* 2,502,477. April 4, 1950.

The process which comprises leaching vegetable material, in which the pectin has been partially de-methoxylated in situ, with aqueous acid at a pH from about 0 to about 2.5.

276J. Coconut processing.

GLABE, E. F. *Assignor to Food Technology, Inc., Chicago, Ill.* 2,502,516. April 4, 1950.

The method of preparing sweetened coconut which comprises intimately mixing coconut fibers with a solid sweetening composition, evacuating air from the pores of said fibers, melting said sweetening composition by the addition of superatmospheric steam and forcing molten sweetening composition into said evacuated pores by steam pressure.

277J. Coconut product and method.

STRAUB, W. F. *Assignor to W. F. Straub & Company.* 2,505,746. April 25, 1950.

A coconut product comprising shredded coconut and liquid honey as a hygroscopic agent for coconut.

278J. Modification of starch.

KERR, R. W. *Assignor to Corn Products Refining Co.* 2,503,053. April 4, 1950.

The process of modifying starch which comprises contacting starch with aluminum chloride hexahydrate at starch temperatures between about 20° C. and about 105° C., said aluminum chloride hexahydrate ranging in amount from about 0.05% to about 0.5%, based upon the dry weight of the starch, said starch undergoing modification containing moisture ranging in amount from about 1-2% to about 20% of the total weight of starch and moisture, the pH value of said starch undergoing modification ranging from about 2.8 to about 3.4.

279J. Method of producing light-colored sirups.

CHRISTENSEN, L. M. *Assignor to National Agrol Company.* 2,503,241. April 11, 1950.

A method of producing syrups of high sweetening power and low color which comprises extracting a starchy substrate with a solvent for sterols and waxes until a substantial proportion of the sterols and waxes are removed, heating an aqueous slurry of the extracted starch to effect gelation thereof, cooking the starch at elevated temperatures, then cooling the cooked mash to optimum saccharification temperatures and inoculating the cooled mash with an amylase-containing saccharifying material.

280J. Preservation of fresh citrus fruits.

GERICKE, C. E. *Assignor to American Machinery Corporation.* 2,503,663. April 11, 1950.

A bath for the treatment of citrus fruit containing a fungicidal agent and a substituted ammonium salt having at least one hydrocarbon chain of 10 to 18 carbon atoms.

281J. Coloration of fresh citrus fruits.

GERICKE, C. E. *Assignor to American Machinery Corporation.* 2,503,664. April 11, 1950.

In a process of enhancing the varietal color of citrus fruit, the step of bringing the fruit into contact with a dye suspended in the solution of a salt of an amine, said amine having at least one hydrocarbon chain of at least 10 to 20 carbon atoms.

282J. Coloration of fresh citrus fruits.

GERICKE, C. E. *Assignor to American Machinery Corporation.* 2,503,665. April 11, 1950.

In a process of enhancing the varietal color of citrus fruit, the step of bringing the fruit into contact with a dye suspended in a solution of an amine at a temperature in the order of 104° F. to 124° F., said amine having at least one hydrocarbon chain of 10 to 20 carbon atoms.

283J. Toasted coconut chips and process of producing same.

O'LEARY, T. B. *Assignor to Evelyn Turner O'Leary.* 2,503,763. April 11, 1950.

The process of producing toasted coconut chips which comprises the steps of slicing raw coconut meat to produce wafer-like chips, pickling the chips in a brine solution, dehydrating the salted chips, and subjecting the dehydrated chips to heat by toasting.

284J. Purification of sugar solutions.

RAWLINGS, F. N. *Assignor to The Dorr Company, New York.* 2,503,767. April 11, 1950.

The method of treating impure sugar-bearing liquids in which the non-sugars include dissolved pectinous and albuminous compounds, which comprises establishing and maintaining a bed of acid-regenerated granular cation exchange material and a bed of alkali-regenerated granular anion exchange material, supplying such impure liquid to the cation bed to precipitate such non-sugars in such liquid incident to the low pH engendered therein by the cation exchange, and passing such liquid through the voids between the granules of the bed, removing liquid from the cation bed with its precipitated non-sugars in suspension therein, flocculating precipitates suspended in the liquid into separable form while detained outside of the cation exchange bed, separating such flocculated non-sugars from the liquid, and supplying the latter to the anion bed.

285J. Preparation of a stabilized cream product.

CHRYSLER, L. H., AND ALMY, E. F. *Assignors to M & R Dietetic Laboratories, Inc.* 2,503,866. April 11, 1950.

A process for producing a milk material comprising treating a fluid milk product having a substantially normal calcium and phosphorus content and a pH of about 6.5-6.8 with a cation exchange material operating in the sodium cycle, until the calcium content of the product is approximately 20 to 70% of normal and there is secured in the product a calcium to phosphorus ratio of about 0.15 to 0.75, thereby raising the pH of the product, and treating the resulting product with a cation exchange material operating the hydrogen cycle until the pH of the original milk product is substantially restored.

286J. Preparation of fondants, fudges, and the like.

LEBESON, H., AND FIELD, A. H. *Assignors to National Syrup Products Co.* 2,504,542. April 18, 1950.

A method of making fondant which comprises heating chip sugar at a temperature not in excess of 165° F. to produce a semi-liquid mass of smooth, creamy consistency, admixing therewith a separately prepared aqueous solution of at least one sugar product from the group consisting of sucrose, corn sugar and corn syrup, and cooling and creaming said mixture.

287J. Separation of starch from wheat flour.

BURDICH, E. M. *Assignor to the United States of America as represented by the Secretary of Agriculture.* 2,504,962. April 25, 1950.

The method of separating starch and gluten from whole wheat and wheat flours comprising forming a batter of the wheat material with sufficient water to hydrate the gluten completely, increasing the gluten to starch ratio of the batter by leaching it with about 3 to 5 parts water and separating the resulting starch milk by screening, aerating the gluten of the resulting mass and separating the aerated gluten from the remaining components by flotation.

News of the Institute

(Continued from page 10)

who were privileged to know him will remember him for other traits—those plus values.

He loved life. He loved people. He gave credit for accomplishment, but he was never satisfied.

He was restless. He was alert. He could tell a good story and he loved the great outdoors and how well I remember some of those outdoor parties with him.

He was a great fisherman and even there he did some inventing. His "Bottom Bumper" is known to many of us. He knew birds and he not only could call them, but he did call them and on one occasion he convinced everyone that he actually had live ducks in his office.

At one time Mrs. Rector tried to interest him in an apartment. She persuaded him to go to see a real estate agent. Tom entered the office and shortly came out smiling. Mrs. Rector inquired, "Is everything O. K.?" To which Tom replied, "Yes, I found the office empty." So, they compromised and bought another home where they would have room for his dogs.

No one ever asked Tom for help and advice who failed to get it.

Yes, gentlemen, Tom was a product of America—he contributed to America—he believed in America and at all times, and over and above his business assignment, he fulfilled his duties as a citizen and was a great credit to his chosen profession.

He believed in making things move—he abhorred the static.

He had initiative and decision. He believed in the ultimate supremacy of right.

He had confidence in men. He had faith in the future.

His was a dynamic life.

In closing, Tom came to me and told me in confidence in an embarrassed, almost schoolboy fashion, of the Award that was to be made to him by you. He was surprised — he was actually amazed at his selection. But I knew then, as I know now, that no experience in his active and successful business life had ever made him so happy.

In conclusion, Tom had great courage and he admired courage. How proud he must be of his life right now.

Presentation of the Nicholas Appert Medal Award by Colonel Rohland A. Isker

It would be an anti-climax to attempt to add to the eloquent tribute paid to Tom Rector by our distinguished speaker, Mr. Clarence Francis. It will not be inappropriate to dwell briefly on the larger meaning of the Appert Award and in so doing, I shall hope to convey to you how richly Tom Rector deserved the honor of its award.

The Jury of Award consists of nine members chosen from members of The Institute of Food Technologists. Each year the executive committee of the Chicago section elects three jurors to serve for a term of three years. Special attention is given to the variety of interests and geographical location in making the selections of the jurors. Each juror is a recognized authority in his own field. The Chairman of the Chicago section is

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Krim-Ko's uniform, established lines of seaplant derivatives—KRIM-KOgel, KRIM-KOloid, KRIM-KOld, KRIM-KO Tendergel and *CARRAGAR*—have proven remarkably effective and dependable in a wide range of food, industrial and pharmaceutical applications. These proven, uniform colloid agents can be as useful to you as they are to some of this country's largest and most successful manufacturers and processors. Tests have proven that they gel, thicken, suspend and stabilize better than most materials heretofore obtainable. Their dependable uniformity makes them especially easy to use.

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News of the Institute

(Continued from page 13)

Chairman of the Jury without vote. Other than this the Chicago Section has nothing to do with the selection of the Medalist unless by chance a member of the Chicago Section is selected as juror. The identity of the jurors is kept confidential within the Executive Committee of the Chicago section. All nominations for medalist and all balloting is conducted by private correspondence between the individual juror and the Chairman of the jury.

The Nicholas Appert Medal Award rules state that "the award shall be made to anyone who, because of his preeminence in and contributions to the field of food technology, is deemed worthy of special recognition by the jury." The award has always been given to men who have been propelled by a consuming desire to discover the innermost laws of nature and to draw out for the use of mankind truths that can be applied to the betterment or extension of our food supply. They have in some cases, as did Nicholas Appert, accomplished momentous results alone. In other cases they have achieved their results by working with and inspiring others. But the source of the achievement in all cases has been integrity of purpose, a refusal to be content with apparent truth, or half truth, or temporary truth.

The Appert Medal, therefore, in its highest interpretation may be said to symbolize "integrity of achievement." Eminent scientists, no matter how widely they may differ in fields of interest, are alike in one thing: Their minds are fixed on their work and on their methods of work. Through that complete dedication to the task in hand they develop the habit of intellectual honesty that unites them. To say that science is a "search for truth" is not speaking idly. These words are the passwords to fame.

This medal, Mrs. Rector, pays tribute to the "integrity of achievement" of Tom Rector. He was a distinguished "searcher for truth" and his name will shine forever on our Roll of Appert Medalists. It is an honor and profound privilege to convey this medal into your safekeeping.

Acceptance by Mrs. Thomas M. Rector

Colonel Isker, Mr. Francis, Ladies and Gentlemen:

I accept the Nicholas Appert Medal Award in the name of my husband.

The knowledge that he was to receive the Award was very dear to him.

I will keep it and cherish it as long as I live.

Thank you.

Regional Section News

PERSONNEL

STANLEY A. BEATTY, Director, Atlantic Fisheries Experiment Station, Halifax, Nova Scotia, has been elected president of the Chemical Institute of Canada. Dr. Beatty's picture appears on the July 10, 1950 issue of *Chemical and Engineering News*.

DANIEL M. DENT, General Manager, The Borden Co., was elected president of the Associates, Food and Container Institute, succeeding Dr. B. S. Clark, director of research, American Can Co., who becomes Chairman of the Board.

BRADLEY DEWEY, President, Dewey and Almy Chemical Co., Cambridge, Mass., returned in June from a two-month trip through France, Switzerland, Holland, Belgium, England and Western Germany. He was the opening speaker on a symposium of "Science and Society," held in June at South Bend, Ind.

MAX S. DUNN, Professor of Biochemistry, University of California at Los Angeles, has been awarded the honorary degree of Doctor of Science by Simpson College, Indianola, Iowa.

FRANK C. ELLIOT, formerly associated with Henry W. Peabody and Co., Inc., Seattle, Washington, has been appointed to the Production Office of the National Security Resources Board. Mr. Elliot has been associated with the canning industry since 1912 when he was employed by the American Can Co.

MAYNARD JOSLYN of the University of California at Berkeley underwent a major operation at Herrick Memorial Hospital in June.

E. T. KEATING of Huron Milling Co. has been appointed Sales Manager of the Food Seasoning Division of that company, succeeding E. R. Jobson who has resigned to purchase a farm in Manchester, Vt. Lucky fellow.

JOHN N. NAIR, Assistant Director of Research, Continental Foods, Inc., was elected Chairman of the New York Section of the American Chemical Society, succeeding Dr. R. M. Burns, Chemical Director, Bell Telephone Laboratories. Mr. Nair took office July 1st.

ROBERT K. PEDERSON, formerly Technologist, Department of Fisheries, Seattle, Washington, is now with French Sardine Co., Los Angeles, where he heads the new quality control and development division of that company.

ELDON H. PFAHLER, formerly food technologist with Cherry Growers, Inc., Traverse City, Michigan, has purchased the Ottawa Canning Co., Coopersville, Michigan. The name of the company will be changed to Samary Food Products, and frozen foods as well as a regular line of canned foods will be packed.

HENRY J. REYNOLDS, for the past 25 years in the chemical research department of Armour and Co., Chicago, has resigned to become process manager for Piedmont Poultry Co., Gainesville, Georgia.

H. K. WILDER, Assistant Director of the National Canners Association's western branch laboratory in San Francisco, has resigned to become director of research for Schuckl and Co., at Sunnyvale, California.

NEW YORK SECTION

The local Arrangements Committee for the 1951 Annual Meeting (which probably by now everyone knows will be held in New York, June 17-21) has been busy during the summer with over-all policy and budget matters so that all activities will shift into high gear by early fall. Chairmen of the various sub-committees are:

(Continued on page 16)

I. F. T. EMPLOYMENT SERVICE

In the interest of bringing together organizations seeking the services of food technologists, and food technologists seeking new positions, the Council of the Institute has established the service outlined below.

A. Organizations in the food and allied industries may run notices of positions open in food technology and no charge will be made for this service. Notices will appear over code numbers and replies will be forwarded promptly to the firm running the notice. In no case will the identity of the firm be revealed. To take advantage of this service simply write to the Executive Secretary of the Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois, describing briefly the position that is open. Notices received before the 10th of any month will appear in the next issue of FOOD TECHNOLOGY, published on the 5th of the following month. Notices received after the 10th will appear one month later. All that is asked is that the firm or organization running the notice acknowledge to the applicant each application received. Should the position not be filled by one insertion the same notice will be repeated upon request.

B. Members of the Institute seeking new positions may run notices in FOOD TECHNOLOGY at $2.00 per issue. This is about one-fifth the regular space rate. Remittance to cover the cost must accompany the notice. Simply mail your notice with $2.00 to the Executive Secretary.

Notices of positions open or positions wanted will be limited in size to one column inch—approximately 30 words.

Members are requested to bring this service to the attention of personnel directors of their organization.

EMPLOYMENT NOTICES

Wanted, cereal chemist, preferably with biochem. training and section leader experience, to head a major development group. Midwest. $7500 if qualified. Reply BOX 108, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois.

Wanted — Leading established canner (East) desires well trained young man for diversified research program on variety of canned foods. Commercial experience desirable but not required if academic training good. Salary—open. Reply Box 104, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois.

Wanted, Food Technologist, chem. & engineering background, experience in milk, cereal or vegetable field, by large midwest food and pharmaceutical manufacturer. Phases of new product development offer real opportunity for right man. Give training, experience, references, salary and photograph. Reply BOX 105, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois.

Wanted, Food Technologists for control and development work. Knowledge of soda fountain operations, ice cream manufacture, dairy operations, canning and preserving desirable. Opportunity for independent operation. Give full details. Reply BOX 110, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Ill.

Position wanted by Food Technologist, B.S. Cornell, 5 yrs. experience production, quality control, product development, and sanitation analysis. Desires quality control or production N. Y. area. Reply BOX 107, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Ill.

Wanted, experienced baking chemist. BS in cereal chemistry or home economics. Interested in baking technology, experimental cookery, statistical evaluation. Southern location. Prefer unmarried woman over 30 years of age. Reply BOX 106, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois.

Wanted, College Graduate, Food Technology or Chemical Engineering background for production and control in fruit processing plant New York State. Give full details, salary, Reply BOX 109, Institute of Food Technologists, 176 W. Adams St., Chicago 3, Illinois

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NEW SAFETY CODE

(Continued from page 9)

been formed since the Code was issued last month to interpret and explain any provisions of the Code and to keep it abreast of the advancements in the art of refrigeration. (Am. Soc. of Refrig. Eng., News Item, July, 1950).

Pickled Fish are TASTIER when Seasoned by FRITZSCHE

Are you a packer of pickled fish? . . . Marinated herrings? . . . Sardines? . . . Fish packed in oil or tomato sauce? If so, you'll be interested in the flavorful spicing compounds developed in our Food Research Laboratories for the fish packing industry. Offering advantages of economy, convenience and unfailing uniformity, these concentrated spice flavors will lend appetizing new delicacy to your line. Write us for details.

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Regional Section News

(Continued from page 14)

Finance—P. D. Kratz
Exhibits—R. C. Sherwood
Publicity and Printing—B. L. Oser; A. A. Schaal (Co-Chairman)
Hotel and Housing—I. D. Garard
Registration—H. G. Beattie
Banquet and Luncheon—R. T. Bohn
Smoker and Entertainment—A. J. Finberg
Meetings—Daniel Melnick
Guests—Ladies—Ruth R. Bien
Field Trips and Transportation—Lawrence Atkin.

Local Section Officers were elected at the May meeting:

Chairman—S. L. Galvin
Vice-Chairman—R. T. Bohn
Secretary—A. A. Schaal
Treasurer—P. D. Kratz
Executive Committee—F. C. Baselt, I. D. Garard, P. P. Gray, A. H. Johnson, F. K. Lawler
National Counselors—R. T. Bohn, S. L. Galvin, R. F. Light, B. L. Oser.

SOUTHERN CALIFORNIA

Officers for 1950-51 are:
Chairman—F. Leslie Hart
Chairman-elect—H. J. Deuel, Jr.
Secretary-Treasurer—Margaret G. Morehouse
Assistant Secretary-Treasurer—G. L. Merchant
Section Councilors—M. S. Dunn (1949-51); A. N. Prater (1949-51); M. S. Burns (1950-51); Ray Cox, alternate (1950-51)
Committee Chairmen—Annual Meeting, E. A. Beavens; New Food Fair, G. M. Cunnungham; National Meeting, P. K. Bates
Executive Committee—F. H. Hunsicker (1949-51); P. J. Rich (1950-51); J. B. Pardieck (1950-52); J. S. Lawless (1950-52)); L. B. Rockland (1950-51).

WORLD PRODUCTION OF MARINE OILS, 1949

All Fats and Oils: World production of all fats and oils in 1949 (up 5 percent over 1948) exceeded the prewar level of production for the first time since the end of hostilities, states a March 6 release from the Office of Foreign Agricultural Relations, U. S. Department of Agriculture.

In general, 1949 saw the end of the acute shortage in world's supply of all fats and oils and the situation should improve further in 1950 when much of the 1949 production will be available for distribution.

In spite of these marked improvements, the world remains short of fats and oils, compared with the per capita level of consumption before the war, and even shorter if inadequate prewar diets for many people are taken into account.

Much of the increase in production since prewar has occurred in the United States and exports from the United States during 1949 made the largest single contribution to the alleviation of the world shortage. Indications are that United States exports will decline somewhat during 1950 because of the intensified shortage of dollar exchange in importing countries. This is likely to mean continued high prices in soft currency areas relative to prices in dollar areas.

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The Huron Milling Co.	9
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Krim-Ko Corp.	13
Magnus, Mabee & Reynard, Inc.	4
Norda Essential Oil & Chemical Co., Inc.	7
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Rohm & Haas Co.	3
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Wm. J. Stange Co.	insert (following page 6)

Marine Oils: In 1949, world production of marine oils (whale and fish), estimated at 684,000 short tons, was up 10 percent from that of 1948 though still well below prewar. This increase resulted principally from a substantial expansion in the production of fish oil—about one-fourth greater than in 1948.

The increase of whale oil output, however, was small because the catch of baleen whales during the 1948-49 Antarctic whaling season again was limited to a maximum of 16,000 blue—whale units under the regulations of the 1946 International Whaling Convention. Whale oil production varies little from year to year because of the limit placed on the pelagic whaling catch in the Antarctic. Exports of whale oil were slightly higher in 1949, compared to 1948.

World production of fish oil in 1949, estimated at 292,000 short tons, is the largest postwar output, but it still was 37 percent below the prewar average. Production in Canada (excluding Newfoundland) and the United States, the world's largest producer, probably did not exceed the 1948 output of 63,200 and 13,300 tons, respectively. Indications are that Norway, the United Kingdom, and possibly several other European countries increased their production in 1949. Newfoundland's fish oil output was considerably larger than a year earlier. Exports of the fish oils were down in 1949. Shipments from Iceland, the principle exporter, were almost 75 percent less than in the preceding year. —*Commercial Fisheries Review,* May, 1950.

GRADUATE ASSISTANTSHIP OPEN

Professor Richard H. Forsythe, Assistant Professor of Poultry Products Technology, Iowa State College of Agriculture at Ames, has a possible opening for a graduate assistant to work towards a Ph.D. in Poultry Products and Food Technology, for the next academic year (1950-51). Annual stipend would be around $800 to $1100, depending upon qualifications. B.S. or M.S. in Chemistry, Bacteriology or Food Technology required. For further details write to Professor Forsythe.

Now U.S. Gov't. o.k.'s Ac'cent in all prepared meats!

Recent Dept. of Agriculture memo* permits use of flavor-heightening monosodium glutamate in cured hams, bacon, corned beef

NOW—IN ALL YOUR prepared meat products—you may include Ac'cent, pure monosodium glutamate, the unique basic seasoning that remarkably heightens natural food flavors! Now, with *all* your prepared meat, you can enjoy the important sales increases that Ac'cent already is producing for others!

For, in a recent supplement to its Memorandum #147*, the Meat Inspection Division of the Department of Agriculture has officially approved the use of monosodium glutamate in the pumping pickle, cover pickle or dry cure mixture for all cured meats. Ac'cent previously had won approval in loaves, soups, stews, hash, sausage, luncheon meat and similar products. **Supplement No. 1, Memorandum No. 147, Meat Inspection Div., U. S. Department of Agriculture, June 6, 1950.*

AC'CENT BRINGS OUT MEAT FLAVOR — Adding no flavor, color or aroma of its own, Ac'cent heightens, to an amazing degree, the good, natural flavors already in meats and most other foods. Equally important — it holds those wonderful flavors . . . helps combat flavor-loss in processing. For Ac'cent, long used as a basic seasoning by chefs and gourmets, is monosodium glutamate in its purest form—99% pure, wholesome crystals derived from vegetable sources.

Test Ac'cent yourself . . . in your own plant . . . with your own products. Our technologists are prepared to demonstrate, convincingly, how Ac'cent can make *your* food flavors sing! Write today for information: Amino Products Division, International Minerals & Chemical Corp., 20 North Wacker Dr., Chicago 6, Ill.

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